

REMARKS

This Amendment is submitted in response to the Office Action of April 5, 2006 (hereinafter "the Office Action"). Claims 8, 19, and 21-23 remain pending.

All references to the claims, except as noted, will be made with reference to the claim list above beginning on page 2. Line numbers cited in the Office Action, except as noted, will count every printed line except the page header, but including section headings. If there is any confusion or questions regarding any aspect of this Amendment, the Examiner is kindly invited to contact the undersigned.

Amendment

Independent claims 8 and 19 are amended to include additional structural features of the system. The specification as filed supports these additions in, for example, paragraphs 35-44. Other minor changes were made to both independent and dependent claims to improve consistency and readability of the claims. Claim 9 is canceled without prejudice. No new matter has been introduced by this Amendment.

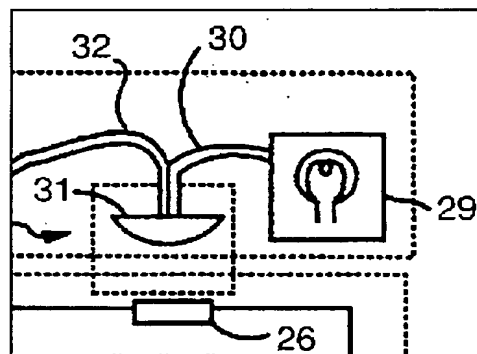
Claim Rejections

Claims 8 and 9 stand rejected under 35 U.S.C. § 102(e) for being anticipated by U.S. Patent 5,658,418 issued to Coronel et al., hereinafter referred to as "Coronel." Claims 19 and 21-23 stand rejected under 35 U.S.C. § 103(a) for being obvious over Coronel in view of U.S. Patent Application Publication 2003/0201162 filed by Liu et al., hereinafter referred to as, "Liu." Applicants respectfully traverse because the prior art does not disclose, teach, or suggest each and every feature set forth in the claims.

For anticipation under 35 U.S.C. § 102(e), each and every feature set forth in the claim must be present in a single prior art reference (MPEP 2131). For obviousness under 35 U.S.C. § 103(a), each and every feature must be taught or suggested by the prior art reference, or references when combined or modified (MPEP 2143). It should therefore be noted that Applicant need only point out a single feature in each claim that is not disclosed, taught, or suggested by any reference identified in the Office Action to overcome the prior art-based rejections. The following discussion therefore should not be construed as an exhaustive listing of every distinguishing feature set forth in the claims.

Independent claim 8 now sets forth a lens system having an optical fiber aperture for receiving optical fibers (line 5), a light source optical fiber bundle (line 6), and a detection fiber bundle comprising a plurality of detector fibers (line 11), the detector fibers being interleaved with fibers from the light source optical fiber bundle at the optical fiber aperture of the lens system (lines 13-15), the lens system being configured to collimate light exiting the light source optical fiber bundle, and project the light onto a spot on the surface of the wafer (lines 7-9). Independent claim 19 includes similar features. By using a collimating light source to project light from an optical fiber bundle having light source optical fibers and detector optical fibers interleaved with each other, each detector optical fiber receives reflected light from only a small portion of the spot generated by the lens system, thus each detector fiber receives reflected light from a different discrete location on the wafer and can be analyzed independently or together with other light from other detector fibers.

In contrast, and in reference to Figure 3 of Coronel, a portion of which is reproduced to the right, Coronel et al. has an optic cable 30 extending from a light source 29 to a collector lens 31, and a separate optic cable 32 extending from collector lens 31 to a pair of sensors 33a, 33b (see Figure 3). Coronel does not mention or suggest that optical fibers from optic cable 30 are interleaved with optic fibers of optic cable 32, and Figure 3 in fact shows them as being separate and distinct up to lens 31. Since the optic cables are not interleaved, and they receive light from optic cable 30 after the light is reflected from the wafer, the light reflected from wafer 24 (Figure 3) must be received over a large region. Therefore the system described in Coronel is not capable of providing a distinct optical signal derived from reflected light received by each fiber of optic cable 32.



Since Coronel does not show each and every feature set forth in the claim 8, Applicant respectfully submits that claim 8 is not anticipated by Coronel and should therefore be allowed. With regard to claim 9, Applicant notes that claim 9 is now canceled, thereby obviating the rejection against claim 9.

With regard to the obviousness rejection under 35 U.S.C. § 103(a) applied to claims 19 and 21-23, Applicant respectfully submits that Liu fails to overcome the deficiencies of Coronel. Liu does not disclose a light source and light source optic cable. Instead, Liu is

directed to a system for receiving light generated directly by the plasma in the etch chamber. See, e.g., the first sentence of paragraph 40.

Since the cited prior art fails to teach or suggest each and every feature set forth in the claims, Applicant respectfully submits that claims 19 and 21-23 are patentable under 35 U.S.C. § 103(a) and should therefore be allowed.

Since, for the reasons mentioned above, none of the prior art references of record describe or suggest the features now set forth in the claims, Applicants respectfully submit that the present application is in condition for allowance. A Notice of Allowance is therefore respectfully requested.

If the Examiner has any questions concerning the present amendment, the Examiner is kindly requested to contact the undersigned at (408) 774-6933. If any other fees are due in connection with filing this amendment, the Commissioner is also authorized to charge Deposit Account No. 50-0805 (LAM2P426). A duplicate copy of the transmittal is enclosed for this purpose.

Respectfully submitted,
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